

## **REMARKS**

Claims 1, 3-6 and 8-12 are pending in this application. By this Amendment, claims 1, 3, 6, 11 and 12 are amended. Claim 3 is amended to address a rejection under 35 U.S.C. §112.

No new matter is added to the application by this Amendment. The features added to claims 1, 6, 11 and 12 find support in the specification, as originally filed, at, for example, page 27, lines 4 and 5 and Examples 1-5.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner Thompson in the January 21, 2009 telephonic interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

Reconsideration of the application is respectfully requested.

### **I. Rejection Under 35 U.S.C. §112**

Claim 3 was rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. This rejection is respectfully traversed.

The Patent Office alleges that claim 3 is rendered indefinite because it depends from canceled claim 2.

In response to the rejection, claim 3 is amended to depend from pending claim 1.

Applicants submit that amended claim 3 is definite and overcomes the rejection under 35 U.S.C. 112, second paragraph.

Thus, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. 112, second paragraph.

## **II. Rejection Under 35 U.S.C. 103**

Claims 1, 3-6 and 8-12 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0007022 to Oosedo et al. (hereinafter "Oosedo") in view of U.S. Patent Publication No. 2005/0271874 to Sakajiri et al. (hereinafter "Sakajiri"). This rejection is respectfully traversed.

The Patent Office acknowledges that Oosedo does not disclose that the carbon fiber is impregnated with a sizing agent in the amount of 0.3 to 5% by mass comprising a vinyl ester resin (see page 3 of the Office Action). The Patent Office introduces Sakajiri as allegedly teaching (1) a sizing agent for a carbon fiber strand for a carbon fiber reinforced resin composite material comprising vinyl ester resin present in the amount of 0.3 to 5% by mass and (2) that the sizing agent affects the adhesion of the carbon fibers and the matrix. Moreover, the Patent Office alleges that it would have been obvious to impregnate the carbon fiber strand in Oosedo with a sizing agent as disclosed in Sakajiri in order to have a carbon fiber reinforced resin composite that has superior interlaminar strength. Applicants respectfully disagree with these allegations.

In response to the October 31, 2008 Amendment and arguments set forth therein, the Examiner states that Applicants provide data regarding wettability, bending strength and impregnability, but do not claim wettability, bending strength or impregnability data.

As discussed during the telephonic interview, the present application discloses that the produced carbon fiber-reinforced resin composite material has a bending strength of 900 Mpa or higher (see page 27, lines 4 and 5 of the present specification) and Examples 1-5 of the present invention have bending strengths, in Mpa, of 920, 940, 950, 900 and 930, respectively (see page Table 1 on page 40 of the present specification).

Additionally, Examiner Thompson agreed with Applicants that (1) Examples 1-5 of the present invention provide evidence of unexpected results and (2) incorporating bending strength features into the present claims overcome the present rejection relying on Oosedo in view of Sakajiri.

Neither Oosedo nor Sakajiri, taken singly or in combination, teaches or suggests the carbon fiber-reinforced resin composite material produced by curing the specifically defined composition and having bending strength of 900 Mpa or higher as recited in amended claims 1, 6, 11 and 12.

In contrast, Oosedo teaches carbon fiber reinforced composite material having an interlaminar shear strength of no more than 103 Mpa (see Examples 1-11 of Oosedo). Additionally, Sakajiri teaches carbon fiber strands having an interlaminar shear strength no greater than 105 Mpa (see Examples 1-8 of Sakajiri). Thus, neither Oosedo nor Sakajiri, taken singly or in combination, teaches or suggests that there are great improvements in bending strength for carbon fiber-reinforced resin composite material produced by curing the required composition of the present claims to achieve a composite material having a bending strength of 900 Mpa or higher as required by claims 1, 6, 11 and 12.

In view of the foregoing remarks and the superior results set forth in present Table 1, the present invention provides a carbon fiber-reinforced resin composite material which could not have been obtained in the prior art. Because the features of independent claims 1, 6, 11 and 12 are not taught or suggested by Oosedo nor Sakajiri, taken singly or in combination, these reference would not have rendered the features of claims 1, 6, 11 and 12 obvious to one of ordinary skill in the art.

For at least these reasons, claims 1, 3-6 and 8-12 are patentable over the applied references. Thus, withdrawal of this rejection under 35 U.S.C. §103(a) is respectfully requested.

## **II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 3-6 and 8-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Early and favorable action is earnestly solicited.

### **CONDITIONAL PETITION FOR EXTENSION OF TIME**

If any extension of time for this response is required, Applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

**ADDITIONAL FEE**

Please charge any insufficiency of fees, or credit any excess, to Deposit Account

No. 14-1263.

Respectfully submitted,

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